

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (canceled)

2. **(currently amended)** A method of controlling an end device that includes an operating system that controls media manipulation to provide a quality of service specified by a user, the method comprising:

receiving an input specifying a demand for a quality of service;

monitoring a quality of service provided to determine whether the quality of service provided meets the quality of service demanded; and

when the quality of service provided is less than the quality of service demanded, using a software agent to assert dynamic control over the operating system to increase resources allocated to the media manipulation to improve the quality of service provided;

wherein

~~The method of claim 1, in which:~~ the end device is connected to a network to which an additional end device is connected;

the quality of service perceived by the user of the end device depends on media signals sent by the additional end device; and

the method additionally comprises:

using the software agent to issue instructions to the additional end device; [[,]] and

using a further software agent located in the additional end device to perform a bit rate control operation in response to the instructions issued by the software agent, the bit rate control operation improving the quality of service at the end device.

3. **(currently amended)** The method of claim 2, wherein ~~in which~~:  
the software agent additionally passes data indicating the quality of service demanded to the additional software agent; and  
the additional software agent performs the bit rate control operation in response to the data indicating the quality of service demanded.

4. **(currently amended)** The method of claim 3, wherein ~~in which~~ the additional software agent performs the bit rate control operation by causing the additional end device to change a parameter ~~one of the following parameters~~ of the media signal transmitted by the additional end device;[::]

said parameter being a number of quantizing levels applied to a video signal ~~signal~~;  
~~a frame rate of the video signal;~~  
~~a picture size of the video signal;~~  
~~bandwidth and number of quantizing bits of an audio signal; and~~  
~~a media synthesis and compounding state of the video and audio signals.~~

5. **(currently amended)** The method of claim 2, wherein ~~in which~~:  
more than one additional end device is connected to the network;  
each additional end device transmits a media signal to the end device;  
the quality of service perceived by the user of the end device depends on media signals sent by each additional end device; and  
the method additionally comprises:  
receiving a priority input assigning a priority to each additional end device, and  
using the software agent to issue instructions to an additional end device having a lowest one of the priorities assigned by the priority input.

6. **(currently amended)** The method of claim ~~[[1]]~~ 2, wherein ~~in which~~ the software

agent causes the operating system to increase resources allocated to the media manipulation by one of:

changing a priority level of the media manipulation, and  
increasing CPU time allocated to the media manipulation.

7. (canceled)

8. **(currently amended)** The method of claim [[7]] 6, ~~wherein in which:~~  
the software agent additionally passes data indicating the quality of service demanded to the additional software agent; and

the additional software agent performs the bit rate control operation in response to the data indicating the quality of service demanded.

9. **(currently amended)** The method of claim 8, wherein ~~in which~~ the additional software agent performs the bit rate control operation by causing the additional end device to change a parameter ~~one of the following parameters~~ of the media signal transmitted by the additional end device;[:]]

~~a number of quantizing levels applied to a video signal,~~

said parameter being a frame rate of the video signal [[:]]

~~a picture size of the video signal;~~

~~bandwidth and number of quantizing bits of an audio signal; and~~

~~a media synthesis and compounding state of the video and audio signals.~~

10. **(currently amended)** The method of claim 8, wherein ~~in which:~~  
more than one additional end device is connected to the network;  
each additional end device transmits a media signal to the end device;  
the quality of service perceived by the user of the end device depends on media signals sent by each additional end device; and

the method additionally comprises:

receiving a priority input assigning a priority to each additional end device, and

using the software agent to issue instructions to an additional end device having a lowest one of the priorities assigned by the priority input.

11. (canceled)

12. **(currently amended)** A system including an end device adapted to provide a quality of service specified by a user, the end device comprising:

an operating system;

resources operating in response to the operating system to perform tasks including media manipulation;

an input device configured to receive parameters specifying a demand for a quality of service;

a quality of service monitor that monitors a quality of service provided to determine whether the quality of service provided meets the quality of service demanded; and

a software agent that operates in response to the quality of service monitor and that, when the quality of service provided is less than the quality of service demanded, asserts dynamic process control over the operating system to increase an allocation of the resources to performing the media manipulation to improve the quality of service provided;

~~The system of claim 11, in which-~~ wherein

the system additionally includes a network to which the end device and an additional end device are connected;

the quality of service perceived by the user of the end device depends on media signals sent through the network by the additional end device; [[and]]

the software agent additionally issues instructions to the additional end device; [[,]] and

the system additionally includes a further software agent located in the additional end device to perform a bit rate control operation in response to the instructions issued by the software

agent, the bit rate control operation improving the quality of service at the end device.

13. **(currently amended)** The system of claim 12, wherein ~~in which~~:

the software agent additionally passes parameters indicating the quality of service demanded to the additional software agent; and

the additional software agent performs the bit rate control operation in response to the parameters indicating the quality of service demanded.

14. **(currently amended)** The system of claim 13, wherein ~~in which~~ the additional software agent performs the bit rate control operation by causing the additional end device to change a parameter ~~one of the following parameters~~ of the media signal transmitted by the additional end device;[[:]]

~~a number of quantizing levels applied to a video signal;~~

~~a frame rate of the video signal;~~

~~a picture size of the video signal;~~

said parameter being bandwidth and number of quantizing bits of an audio signal ~~signal~~;

and

~~a media synthesis and compounding state of the video and audio signals.~~

15. **(currently amended)** The system of claim 12, wherein ~~in which~~:

the system additionally includes more than one additional end device connected to the network;

each additional end device transmits a media signal to the end device through the network;

the quality of service perceived by the user of the end device depends on media signals sent by each additional end device;

the input device is additionally configured to receive a priority input assigning a priority to each additional end device;

the software agent additionally issues instructions through the network to an additional end

device having a lowest one of the priorities assigned by the priority input.

16. (canceled)

17. (previously presented) A method of reproducing one or more multimedia streams at a local end device in accordance with a user-specified quality of service, comprising:

receiving one or more multimedia streams from respective remote end devices;

determining whether a quality of service for one or more of the received multimedia streams is less than the user-specified quality of service; and

after determining that a quality of service for one or more of the received multimedia streams is less than the user-specified quality of service, transmitting to a selected remote end device a request for a bit rate control operation to be performed at the selected remote end device.

18. (previously presented) The method of claim 17, wherein the bit rate control operation request includes a set of quality of service parameters.

19. (previously presented) The method of claim 18, wherein the set of quality of service parameters includes a specification for a minimal quality of service for the multimedia stream supplied by the selected remote end device to the local end device.

20. (previously presented) The method of claim 17, wherein, based upon the transmitted bit rate control operation request, the selected remote end device reduces a quality of service for the multimedia stream supplied by the selected remote end device to the local end device.

21. (previously presented) The method of claim 17, further comprising prompting a user to assign a relative quality priority for each of the received multimedia streams.

22. (previously presented) The method of claim 21, further comprising selecting to receive the bit rate control operation request a remote end device supplying a multimedia stream with a lowest user-assigned relative quality priority.

23. (previously presented) The method of claim 22, further comprising:  
after the request bit rate control operation is performed at the selected remote end device, determining whether a quality of service for one more or more of the received multimedia streams is less than the user-specified quality of service; and

transmitting a bit rate control request to a remote end device supplying a multimedia stream with a next lowest user-assigned relative quality priority after determining that a quality of service for one or more of the received multimedia streams is less than the user-specified quality of service.

24. (previously presented) The method of claim 17, further comprising dynamically reallocating resources on the local end device in favor of multimedia processing after determining that a quality of service for one or more of the received multimedia streams is less than the user-specified quality of service.

25. (previously presented) The method of claim 24, further comprising determining whether the local end device has resources available to allocate dynamically to media manipulation.

26. (previously presented) The method of claim 25, wherein the bit rate control operation request is transmitted to the selected remote end device after determining that no resources are available to dynamically allocate to media manipulation.

27. **(new)** The system of claim 13, wherein the additional software agent performs the bit rate control operation by causing the additional end device to change a parameter of the media signal transmitted by the additional end device;

said parameter being a media synthesis and compounding state of the video and audio

signals.

28. **(new)** A method of controlling an end device that includes an operating system that controls media manipulation to provide a quality of service specified by a user, wherein the end device is connected to a network to which more than one additional end device is connected, and each additional end device places a bitstream representing a video and/or audio signal on the network;

the method comprising:

- a. one of said additional end devices receiving and decoding the bit streams of multiple video and/or audio signals placed on the network by the other additional end device or devices,
- b. said one additional end device synthesizing the decoded multiple video and/or audio signals to generate a single compound video and/or audio signal,
- c. said one additional end device placing a bitstream representing the synthesized single compound video and/or audio signal on the network,
- d. the end device receiving and decoding the bitstream representing the synthesized single compound video and/or audio signal to reproduce the video and/or audio signals generated by the other additional end devices.

29. **(new)** The method of claim 28, wherein the additional end device that performs the steps a-c is dynamically changed in response to changes in the task loads on said additional end devices.

30. **(new)** A system including an end device adapted to provide a quality of service specified by a user, wherein the end device is connected to a network to which more than one additional end devices is connected, and each additional end device places a bitstream representing a video and/or audio signal on the network;

one of said additional end devices being configured as a multipoint control unit (MCU)



operable to performed the steps of

receiving and decoding the bit streams of multiple video and/or audio signals placed on the network by the other additional end device or devices,

synthesizing the decoded multiple video and/or audio signals to generate a single compound video and/or audio signal, and

placing a bitstream representing the synthesized single compound video and/or audio signal on the network,

the end device being operable to perform the step of receiving and decoding the bitstream representing the synthesized single compound video and/or audio signal to reproduce the video and/or audio signals generated by the other additional end devices.

31. **(new)** The system of claim 30, wherein the additional end device being configured as the MCU is dynamically changed in response to changes in the task load on the additional end devices.